Singapore (n=9), Hong Kong (n=6), Thailand (n=6), South Korea (n=6), India (n=5), Bangladesh (n=1), and Iran (n=1) (some studies pertain to more than one country). The CUAs contained 294 ICERs and 436 utility weights. The median ICER for all Asian CUAs was $11,000/QALY. The median ICER for tertiary prevention interventions ($9,800/QALY, n=157) was favorable, compared to the ICERs for primary and secondary prevention interventions ($22,000/QALY, n=69 and $33,000/QALY, n=62); (p<0.005). The median ICER for immunizations was most favorable ($2,300/QALY, n=33), followed by surgical interventions, diagnostic interventions and pharmaceuticals and medical devices. In contrast, screening programs reported the least favorable ratios ($37,000/QALY, n=90). Studies examining infectious diseases had a lower median ICER ($8,500/QALY, n=43), compared to ICERs for interventions for cardiovascular diseases and cancer. **CONCLUSIONS:** Over 100 English-language CUAs targeted toward Asian countries have been published in English-language journals in recent years. Compared to interventions for primary and secondary prevention, interventions targeted towards treatments were relatively cost-effective. ICERs for screening programs have been relatively cost-ineffective.

PRM34

WHY ARE THE FINDINGS OF COST-EFFECTIVENESS ANALYSES OF BIOLOGIC TREATMENT FOR RHEUMATOID ARTHRITIS SO DIFFERENT?

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OBJECTIVES: To evaluate the quality of published cost-effectiveness analyses of biologic disease modifying antirheumatic drugs (bDMARDs) for rheumatoid arthritis (RA), and to identify methodological issues that can explain the discrepancies in the findings of these cost-effectiveness analyses. **METHODS:** We performed a systematic literature review to identify cost-effectiveness analyses of biologics indicated for RA. We compared the incremental the cost-effectiveness ratios (ICERs), the net health benefits (NHB), the net monitory benefits (NMB), cost-effectiveness acceptability curves (CEACs), and cost-effectiveness frontiers. **RESULTS:** We observed large discrepancies, which were predominantly due to the use of different information sources on the effectiveness of the considered biologics. First, substantial differences were observed in the ICER, NHB, NMB estimates. When considering the uncertainty associated with the NHB and NMB estimates, i.e. their 95% confidence intervals, differences were still apparent. CEACs and cost-effectiveness frontiers were only reported in a sub-set of the identified publications. Reading from the CEACs and cost-effective frontier graphs, fixed willingness to pay thresholds yielded different probabilities of the considered biologics being cost-effective. **CONCLUSIONS:** Cost-effectiveness analyses of biologics indicated for RA need to carefully consider the source of information used as model inputs. Future cost-effectiveness analyses need to assess the large number of evidence synthesis studies conducted on the relative effectiveness of biologics when determining the appropriate model inputs.

PRM35

ECONOMICS OF COSTS IN ADDED YEARS OF LIFE: A REVIEW OF METHODOLOGIC PRACTICES AND CONSEQUENCES FOR COST-EFFECTIVENESS

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OBJECTIVES: There is some disagreement in the literature as to whether analysts should include all "future" costs or make distinctions between related and unrelated medical costs. Most guidelines lack definitive recommendations and urge analysts to use discretion or to employ sensitivity analysis to show how different approaches influence results. This study evaluated cost methods used in the published literature and evaluated the impact on cost-effectiveness of including different cost categories. **METHODS:** Systematic review included cost-utility analyses from the Tufts CEA Registry published since 2000. We included cancer intervention studies where the intervention extended life expectancy. We identified specific types of costs included, and whether they varied by study characteristics such as cancer type, intervention type, country, perspective, conclusions. Further, we estimated alternative incremental cost-effectiveness ratios (ICERs) in which the ratio reflected different cost categories, including net costs due to study intervention, related medical costs of the treated condition, and unrelated medical costs. **RESULTS:** Of the 59 studies reviewed, none included medical costs unrelated to the treated condition, and 14 studies (24%) excluded direct medical costs related to the condition but not the evaluated intervention. Most studies assumed a health care payer perspective, included pharmaceutical interventions and reported ratios below $50,000/QALY. A greater proportion of government than industry studies included nonmedical costs. Recomputing ICERs by eliminating medical costs not affected by the evaluated intervention made 26 additional ratios (68%) cost-saving and 4 more ratios (11%) cost-effective. Recomputing ICERs by including unrelated medical costs made 6 fewer ratios (10%) cost-saving and 4 fewer ratios (7%) cost-effective. **CONCLUSIONS:** Conventional CE methods may implicitly penalize therapies that add "expensive" life years for chronically ill patients. Presenting ICERs computed with and without disease-attributable costs can help better convey how much the treatment itself contributes to overall costs. Inclusion of unrelated medical costs affects ICERs less strongly.

PRM37

USING THE QUALITY OF HEALTH ECONOMIC STUDIES INSTRUMENT TO ASSESS PHARMACOECONOMIC STUDIES EVALUATING RECENT FOOD AND DRUG ADMINISTRATION DRUG APPROVALS

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OBJECTIVES: To determine study quality, estimate quality scoring reliability, and assess theorized quality predictors of pharmacoeconomic publications evaluating recent new molecular entity and biologic license approvals (NMEs) by the Food and Drug Administration (FDA). **METHODS:** Original pharmacoeconomic studies (cost-effectiveness, cost-utility, cost-benefit or cost-minimization) considering any of 50 NMEs approved in 2008-09 and published on or before December 31, 2011 were eligible. MEDLINE and the UK National Health Service Economic Evaluation Database were searched. Quality was scored with the Quality of Health Economic Studies (QHES) instrument for each publication by one primary and two secondary reviewers. Interrater reliability was assessed using Pearson correlations of QHES scores. Regression was performed of QHES score on study characteristics including number of authors, journal impact factor one-year pre-submission, journal type (disease-specific/general clinical/health economic), NME FDA review classifications (priority/standard and orphan/non), publication timing (pre-/post-NME approval), author(s) having academic affiliation (yes/no), advanced modeling PE techniques (yes/no), United States study (yes/no), data (primary/secondary), incorporation of quality-adjusted life years (yes/no), and conclusion (favorable/unfavorable for NME). **RESULTS:** The literature search yielded 203 search results with 37 publications meeting inclusion criteria, encompassing 38% of the 2008-09 NMEs. Averaging all reviewers, the QHES score range was 15-92, with a median 70, and mean 68.4±18.4. The total QHES score was significantly correlated between reviewers (R= 0.677). A square transformation was applied to QHES score to correct for a negatively skewed distribution. Regression analyses were non-significant for all study characteristics, although use of advanced modeling PE techniques approached significance (p=0.083). **CONCLUSIONS:** QHES scores indicated that the quality of pharmacoeconomic literature for newly-approved NMEs varies, although the 51.3%, 19, highest scoring studies (including and above the median) were near or exceeded the 75 point threshold considered "good". Interrater reliability for QHES assessment was fair. Sample size was insufficient to identify significant predictors among the variables analyzed.

PRM38

A SYSTEMATIC REVIEW ON THE QUALITY OF PHARMACOECONOMICS STUDIES IN CHINA

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OBJECTIVES: To evaluate the extent and quality of published pharmacoeconomics studies based in China. **METHODS:** A systematic literature search was conducted using PubMed, Web of Science, and Google Scholar to identify pharmacoeconomics studies conducted in China. The keywords included different combinations of the following: health economics, pharmacoeconomics, cost-effectiveness, and China. The inclusion criteria for the studies were as follows: 1) original research articles; 2) written in English; 3) compared a pharmaceutical to another pharmaceutical, treatment modality, or no treatment; and 4) conducted in China. The articles were reviewed by two independent reviewers using the 100- point Quality of Health Economic Studies (QHES) scale for pharmacoeconomic studies and a subjective 10-point scale for cost studies. Disagreements were settled by a third researcher. General and economic analysis information of the articles was collected. **RESULTS:** A total of 19 studies were included. The studies were published in 11 different journals between 2006 and 2012 with an average of five authors (SD=2.5). The mean QHES scores for the 17 pharmacoeconomic studies was 80.4 (SD=9.9) and the mean quality score for the two cost studies was 7.0 (SD=0.7). More than two-thirds of the authors resided in China (68.4%) and most of them had a medical background (89.5%). Most studies were published in journals based in foreign countries (not China) (89.5%) and used modeling as their study design (80.0%). Articles published in foreign journals had a higher quality score but the difference was not significant (80.5 ± 9.7 vs 69.0 ± 8.5). **CONCLUSIONS:** China-based pharmacoeconomics studies written in English are limited, but on average, are of good quality. Economic evaluation of pharmaceuticals should be encouraged in China because appropriate allocation of health care resources is important in a country with large unmet medical needs.

PRM39

TRENDS IN COST EFFECTIVENESS OF HIGH BUDGET IMPACT PRODUCTS

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OBJECTIVES: The recently made coverage decisions by the UK's NICE, Scotland's SMC and the allocation of $1.1 billion for comparative effectiveness research by the U.S. are strong indicators of trends in pricing and reimbursement that are likely to be observed in the future. To gain an additional insight into these trends, we analyzed the cost effectiveness studies for the top twenty highest selling drugs (~$90-100B worldwide sales). **METHODS:** The Top 20 drugs were selected based on their worldwide sales. For this analysis, we segmented these drugs into categories such as primary care, specialty, small molecules, biologics, therapy areas, and availability of generic alternatives. We analyzed the cost effectiveness studies that were published in peer-reviewed journals. Searches were conducted using generic names of the drugs and the phrase "cost effectiveness" in an abstract of the published study. **RESULTS:** Between 2007-2012, the number of published studies on "cost effectiveness" has increased by more than 32%. There is a large variability in CERs for same drugs for different indications, in some cases also varying by biomarkers. Primary care drugs had lower and less variable CERs than specialty drugs. Variations also exist in methodology used by different groups in modeling cost effectiveness, especially for time horizon and comparator. The majority of primary care drugs were